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**ABSTRACT OF THE DISCLOSURE**  
**ACTIVE COMPENSATION FOR OPERATING POINT DRIFT IN AN MRAM**  
**WRITE OPERATION**

A method and apparatus for minimizing errors that may occur when writing  
5 information to a magnetic memory cell array with an operating write current due to  
changes in the local magnetic fields and. A test write current is sent to a reference  
memory cell and the effect of the test current on the orientation of the magnetization in  
the reference cell is monitored. The write current is then modified to compensate for  
any changes in the optimum operating point that have occurred. Arrays of reference  
10 magnetic memory cells having varying properties may be used to more accurately  
characterize any changes that have occurred in the operating environment. A phase  
difference between a time varying current used to drive the reference cell and the  
corresponding variations in the orientation of the magnetization in the reference cell  
may also be used to further characterize changes in the operating environment.

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